

No. 788,274.

PATENTED APR. 25, 1905.

G. E. MATTHEWS.

PROCESS OF MAKING PRINTS ON DARK BACKGROUNDS.

APPLICATION FILED MAY 26, 1904.

Fig. 1.

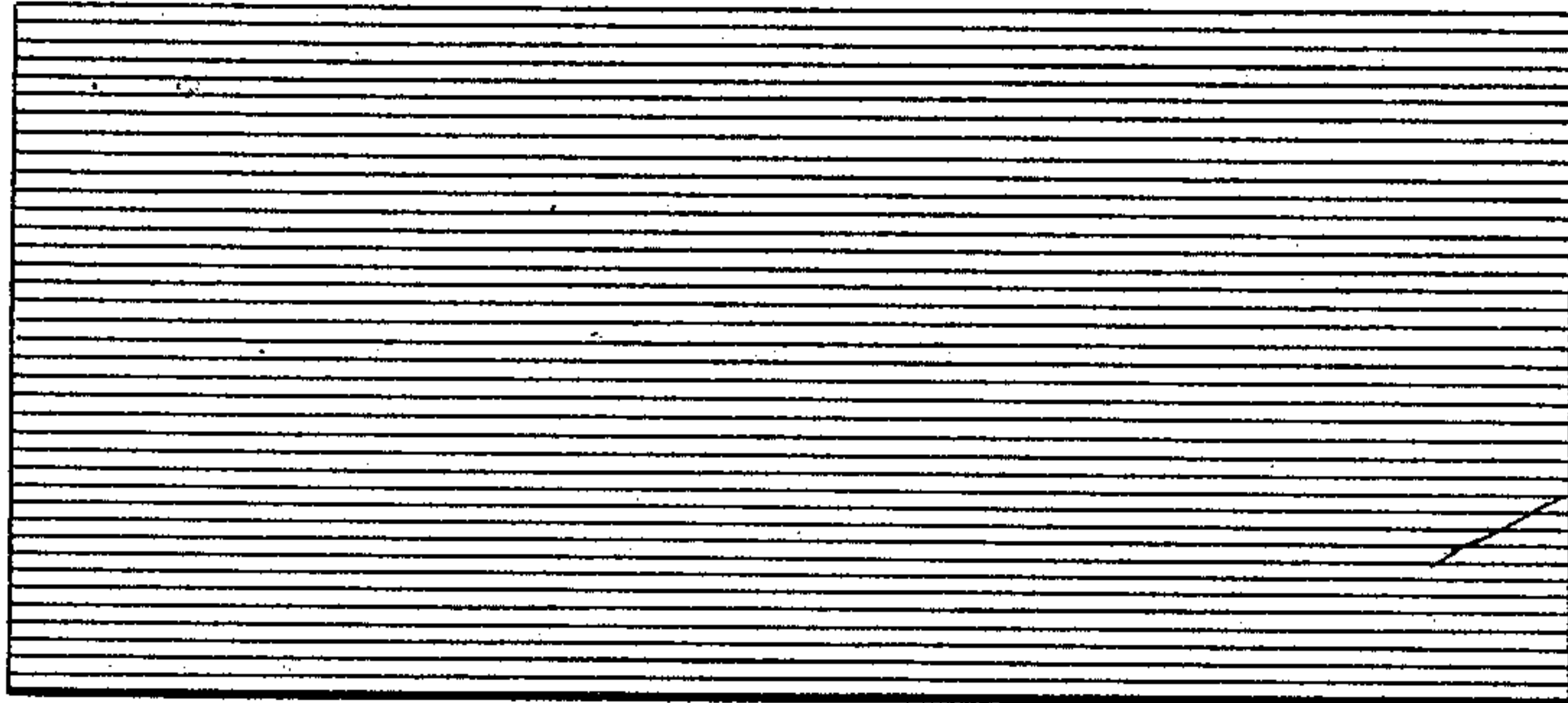


Fig. 2.

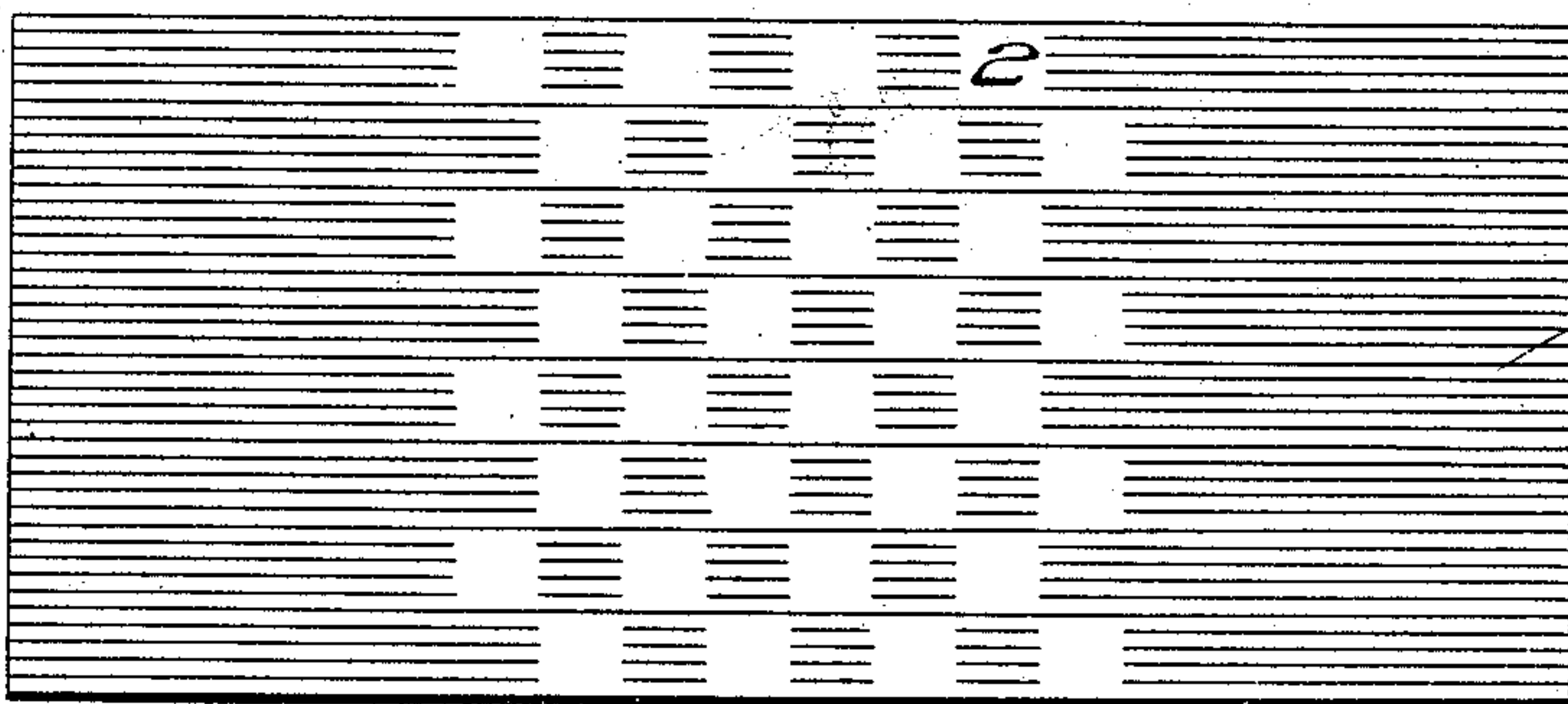
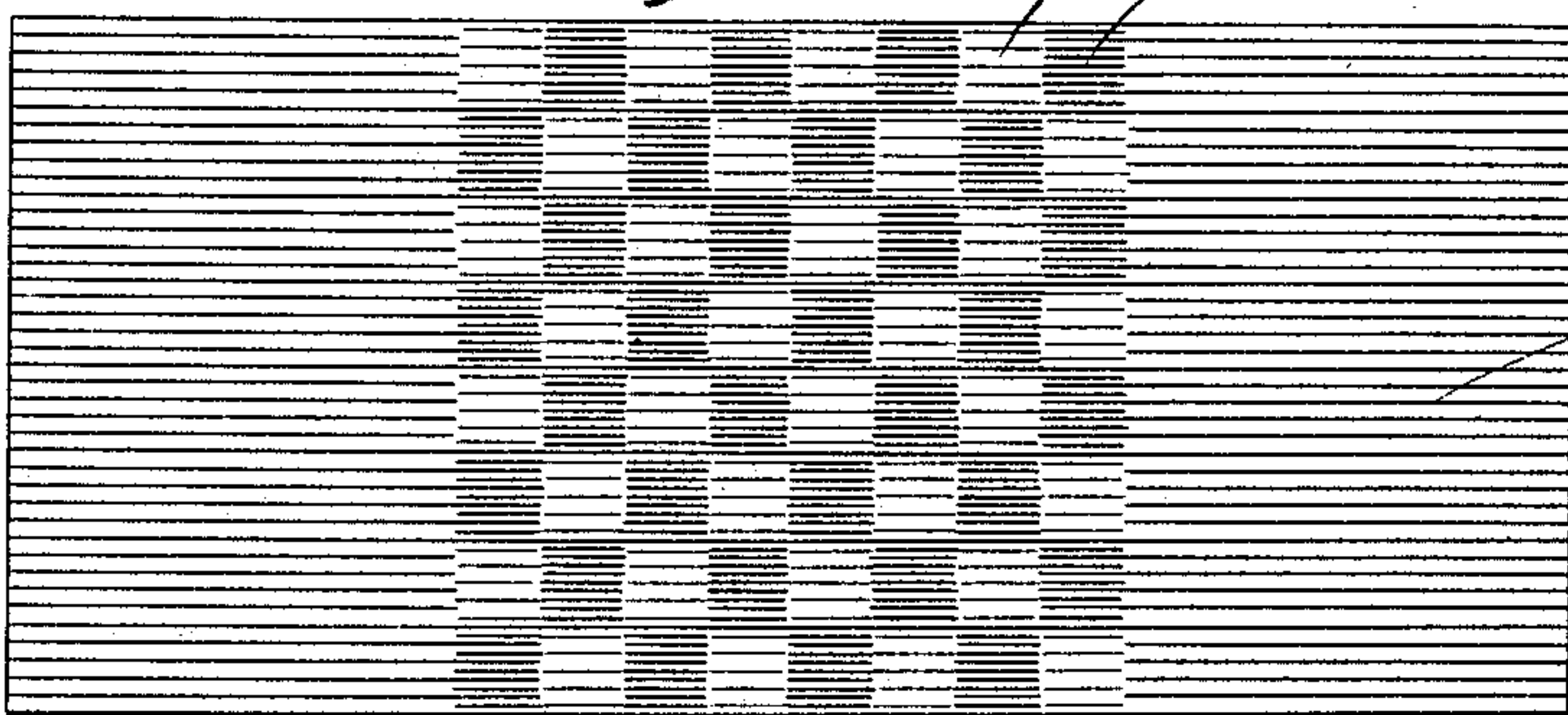


Fig. 3.



WITNESSES:

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PROCESS OF MAKING PRINTS ON DARK BACKGROUNDS.

SPECIFICATION forming part of Letters Patent No. 788,274, dated April 25, 1905.

Application filed May 26, 1904. Serial No. 209,905.

To all whom it may concern:

Be it known that I, GEORGE E. MATTHEWS, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Processes of Making Prints on Dark Backgrounds, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to making by the photomechanical process half-tone pictures or prints on a dark background.

The object of my invention is to produce on a dark background, such as dark paper or other material of dark shade, a print having the true shade values of the object represented by the print.

Other objects will appear from the hereinafter description.

In carrying out my invention I make two half-tone printing-plates by the photomechanical process, one of these plates being made directly from a negative and the other being made from a positive taken from that negative, and from these two plates I make my prints. To make the first-referred-to plate, I make a photographic negative, preferably on glass, of the subject to be photographed or illustrated. From this negative I make a half-tone negative, and from said half-tone negative I make a half-tone printing-plate. In making the second printing-plate I make from the original photographic negative a photographic positive, and from said positive I make a half-tone positive. From this half-tone positive I produce the second printing-plate. The half-tone negative and positive and both the half-tone printing-plates are made in the usual and well-known manner by the photographic process. Having now made two half-tone printing-plates, the first of which I will term the "negative" plate and the other the "positive" plate, I proceed to print from them as follows to obtain a finished print having all the true shade values. It may be stated at first that if a print be made in the usual manner from these two plates dark would appear in the print where there should be white or light shade. In order to overcome this objection and to bring out in the

print the true color values, I ink the negative plate with white or a light-shade ink and then print in this shade on dark paper or other material of dark shade or background. To the positive printing-plate I apply a dark-shade ink and take a second impression from this positive plate, the second impression being superimposed upon the first. By these two printings I obtain a finished print which has the proper or true shade values as appear in the original subject.

In the accompanying drawings, in which is shown diagrammatically a method of making a simple print according to my process, Figure 1 is a plan of the printing-surface before an impression is made thereon. Fig. 2 is a similar view of the same surface after an impression has been made with one plate. Fig. 3 represents the completed print.

Similar reference characters refer to similar parts throughout the several views.

In Fig. 1 is shown a printing-surface 1, which may be of any desired color and is herein shown as of a dark shade. If it be desired to print upon this surface a representation of a checker-board having alternate squares of black and of a neutral tint, an impression is first made, as above indicated, in white ink, the resulting print being represented at Fig. 2 and the lighter squares 2 being shown thereon. A second impression from the plate, bearing dark ink, is now superimposed upon the first impression and the completed print results, as shown in Fig. 3, wherein the squares 3 are formed by the first impression, in white ink, blended with a second impression, in darker ink, so as to obtain the desired tint or shade. The squares 4, which are to be the darker or black squares of the checker-board, receive a heavy impression from the second plate, and the print is thus completed.

While I have set forth above a preferred way of making the half-tone printing-plate, yet I do not wish to confine myself to the said manner of producing the plates, as they can be produced by different steps from there stated. For example, the negative printing-plate may be made directly from the photographic negative, and a screen and the second plate may be made directly from the photo-

graphic positive (made from the original photographic negative) and a screen in a manner well known, thus dispensing with the step of making the half-tone positive and half-tone negative, as above described. These plates may also be made in other obvious ways.

While I have stated that I prefer to print first from the negative plate, which is inked in light-colored ink, and then from the positive plate, inked in a dark shade, yet I do not wish to confine myself to this, as either one of these impressions may be made before the other. It is necessary, however, to obtain the results accomplished by me to print in light-colored ink from the half-tone plate made from the negative half-tone plate and to print in dark ink from the positive half-tone plate.

The advantages of my invention are that it enables one to produce a print or illustration on dark paper or other material having a dark background and to make a superior reproduction, one far more attractive than has heretofore been made on white paper with any number of printings. The double printing, as I have here described, gives a most remarkable modeling effect, which has not heretofore been accomplished, and no one, so far as I have been able to ascertain, has ever made or produced the results that have been accomplished by me in the simple and direct way which I have here set forth.

It is obvious that various changes than those hereinbefore stated may be made without departing from the spirit of my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The process of making a half-tone print which consists in making two impressions on a dark background, one impression being made in light ink and the other being made in dark ink, the two impressions being superimposed.

2. The process of making a print which consists in making two impressions on a dark background, the first being in light ink and the second in dark ink, the two impressions being superimposed and blended one with the other.

3. The process of making a print which consists in making two impressions on a dark background, the first being in white ink and the second in dark ink, the two impressions being superimposed and blended one with the other.

4. The process of making a print which consists in taking two impressions on a dark background, one in light ink from a negative plate and another in dark ink from a positive plate, the two impressions being superimposed.

5. The process of making a print which consists in taking two impressions on a dark background, one in white ink from a negative plate and another in dark ink from a positive plate, the two impressions being superimposed.

6. The process of printing on a dark background which consists in inking a negative

plate in light ink, taking an impression from said negative plate on dark paper, inking a positive plate in dark ink and taking a second impression from the latter plate, the two impressions being superimposed.

7. The process of printing on a dark background which consists in inking a negative plate in white ink, taking an impression from said negative plate on dark paper, inking a positive plate in dark ink and taking a second impression from the latter plate, the two impressions being superimposed.

8. The process of making a half-tone print which consists in making a negative half-tone printing-plate and a positive half-tone printing-plate, inking the negative half-tone printing-plate in a light ink and the positive plate in a dark ink, taking an impression from each plate, the two impressions being superimposed.

9. The process of making a half-tone print on a dark background which consists in making a negative half-tone printing-plate and a positive half-tone printing-plate, inking the negative half-tone printing-plate in white ink and the positive plate in dark ink, taking an impression on a dark paper or other background from each plate, the two impressions being superimposed.

10. The process of making a half-tone print which consists in making a negative half-tone printing-plate and a positive half-tone printing-plate, inking the negative half-tone printing-plate in a light ink and the positive plate in a dark ink, taking an impression first from the negative plate and then taking a second impression from the positive plate, the two impressions being superimposed.

11. The process of making a half-tone printing-plate on a dark background which consists in making a negative half-tone printing-plate and a positive half-tone printing-plate, inking the negative half-tone printing-plate in white ink and the positive plate in a dark ink, taking an impression first from the negative plate on a dark paper or other material having a dark background and then taking a second impression from the positive plate, the two impressions being superimposed.

12. The process of making a half-tone print which consists in making a negative, making from said negative a half-tone printing-plate, making from said negative a positive, making from said positive a positive half-tone printing-plate, inking the negative printing-plate in a light-colored ink, taking an impression therefrom, inking the positive printing-plate in a dark ink and taking an impression therefrom, the two impressions being superimposed.

13. The process of making a half-tone printing-plate on a dark background which consists in making a negative, making from said negative a half-tone printing-plate, also making from said negative a positive, making from

said positive a half-tone printing-plate, inking the negative printing-plate in a white ink, taking an impression therefrom on a dark paper or other material having a dark background, 5 inking the positive printing-plate in a dark ink and taking an impression therefrom, the two impressions being superimposed.

14. The process of making a half-tone print which consists in making a negative, making 10 a half-tone negative from said negative, making a half-tone printing-plate from said half-tone negative, making a positive from the first negative, making a half-tone positive from said positive, making a half-tone printing- 15 plate from the half-tone positive, inking the negative printing-plate in a light ink, taking an impression from this printing-plate, inking the positive printing-plate in a dark ink and taking an impression from said second 20 plate, the two impressions being superimposed.

15. The process of making a half-tone print-

ing-plate on a dark background which consists in making a negative, making a half-tone negative from said negative, making a half-tone 25 printing-plate from said half-tone negative, making a positive from the first negative, making a half-tone positive from said positive, making a half-tone printing-plate from the half-tone positive, inking the half-tone 30 printing-plate in white ink, taking an impression from this printing-plate on a dark paper or other material having a dark background, inking the positive printing-plate in a dark ink and taking an impression from said 35 second plate, the two impressions being superimposed.

In testimony whereof I affix my signature in the presence of two witnesses.

GEORGE E. MATTHEWS.

Witnesses:

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H. M. SEAMANS.